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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,445	06/26/2003	Shuichi Sugita	2204-031174	2951

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EXAMINER

KRUER, KEVIN R

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,445	<b>Applicant(s)</b> SUGITA ET AL.	
	<b>Examiner</b> Kevin R Krueer	<b>Art Unit</b> 1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

2. The drawings filed July 1, 2004 are accepted.

***Claim Rejections - 35 USC § 102***

Note: for purposes of examination, the term "flake" is understood to be a "flattened piece" as defined by Merriam Webster's Collegiate Dictionary.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pfenninger et al (US 5,025,041).

Pfenninger teaches a pearlescent coating composition comprising a resin binder system and coated-mica particles (abstract). The coated-mica particles are preferably flakes (col 3, line 19) and are coated with metallic oxides such as titanium dioxide, iron oxides, or mixtures thereof (col 2, lines 63+). The coating composition is of particular value in two-coat automotive paint systems wherein the pearlescent composition is applied as the base coat to a metallic substrate (col 4, lines 3+) and a clear topcoat is then applied thereto (abstract). Pfenninger teaches that it is preferable to apply two to four layers of the pearlescent coating composition to the substrate (col 4, lines 12+). In such an embodiment, the bottom layer of said multi-layer pearlescent coating is understood to read on the claimed "under clear coat" and the coated mica is understood to read on the

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claimed "translucent flaky pigment" of claim 6. Furthermore, the metal oxide coating is understood to meet the "metal oxide" embodiment of claim 7.

The pearlescent coatings taught in Pfenninger are understood to be "clear" because they do not contain any pigment.

5. Claims 1-3, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Panush et al (US 4,547,410).

Panush teaches a polymer coating containing mica pigments (abstract) that is applied to a metal substrate (col 3, lines 44+). The mica particles are coated with metal oxide particles such as titanium dioxide, zirconium dioxide and iron oxide (incorporated by reference to US 4,407,969). The particles are platelets (herein understood to be analogous to "flakes") and pearlescent (herein understood to be analogous to the claimed "translucent inorganic flake"). Said layer is understood to read on the claimed "under clear coat." The coating may have a transparent topcoat applied thereto (col 4, line 10). The topcoat may additionally contain coated mica pigments (col 4, lines 12+) and is understood to read on the claimed "clear-paint" film.

***Claim Rejections - 35 USC § 103***

6. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Pfenninger et al (US 5,025,041), as applied to claims 1-3 and 6-8 above, and further in view of Baumgart et al (US 6,534,185).

Pfenninger is relied upon as above, but does not teach the claimed relative thickness of the clear coat. However, Baumgart teaches a clearcoat for an automobile finish (col 1, lines 5+) for use in two-coat systems (col 8, lines 7+).

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Baumgart teaches that the thickness of the clear coat would be varied in order to achieve the particular desired technical and visual effect (col 9, lines 5+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the thickness of the clearcoat taught in Pfenninger. The motivation for doing so would have been to obtain the desired technical and visual effects for the two-coat system.

The examiner notes that by varying the thickness of the clearcoat, one is inherently varying the ratio of the relative thickness of the clear coat to the pearlescent coat.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panush et al (US 4,547,410), as applied to claims 1-3, 6, and 7 above, and further in view of JP 62057676 (herein referred to as Kansai).

Panush is relied upon as above, but does not teach that the topcoat should comprise a matting agent. However, Kansai teaches a multi-layer coating comprising a pigmented basecoat and a topcoat comprising a matting agent. Preferred matting agents include silica and silicates with an average particle size of 4-6um (abstract). Using said matting agents in the topcoat results in a matted film (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a silica or silicate matting agents to the topcoat taught in Panush. The motivation for doing so would have been to give the resulting multi-layer coating a matted appearance.

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8. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panush et al (US 4,615,940) in view of Pfenninger et al (US 5,025,041).

Panush teaches an opalescent color effect produced by utilizing a multi-coat coating system on a substrate (abstract). Preferred substrates include metal materials (col 2, line 26). The first coat is primer color coat (abstract). The second coat is a transparent interference coat containing a polymeric binder and a metal oxide encapsulated in mica particles (abstract). Useful metal oxides include titanium dioxide and iron oxide (col 7, lines 25+). A final layer of clear coat is applied to the interference coat (col 8, lines 45+). Said layer is understood to read on the "top clear coat" of claim 8.

The mica particles of Panush are understood to read on the claimed "transparent or translucent inorganic flakes" because Applicant discloses mica is useful as said flake. The titanium dioxide coating is understood to read on the claimed "transparent or translucent metal oxide layer" because Applicant discloses titanium dioxide is useful as said coating. Furthermore, the particles are taught to have a size of 5-60um in their largest dimension and a thickness of 0.25 um. (col 7, lines 25+). Particles with such dimensions are understood to read on "flakes."

With regard to claim 9, Panush teaches that the interference coat should have a thickness of 0.7-1.3 mil (col 8, line 40). Furthermore, the clear coat should have a thickness of 1.8-2.3 mil (col 8, line 51). Thus, the ratio of the thickness of the interference coat to the clear coat is 0.3-0.7. Said range

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overlaps the claimed range and is understood to anticipate films wherein the thickness ratio is 0.5-0.7.

Panush is relied upon as above, but does not teach that the laminate should comprise a transparent or translucent under clear coat that comprises translucent flaky pigment therein. However, Pfenninger teaches a pearlescent coating composition comprising a resin binder system and coated mica particles (abstract). Said mica particles are coated with metallic oxides such as titanium dioxide, iron oxides or mixtures thereof (col 2, lines 63+). The coating composition is of particular value in two-coat automotive paint systems (abstract). Pfenninger teaches that it is preferable to apply two to four layers of the pearlescent coating composition to the substrate (col 4, lines 12+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an additional 1-3 layers of the interference coat taught in Panush to said laminate. The motivation for doing so would have been that Pfenninger teaches additional coatings of pearlescent compositions in a two-coat paint system are preferable.

In such an embodiment, the bottom layer of said multi-layer interference coat is understood to read on the claimed "under clear coat" and the coated mica is understood to read on the claimed "translucent flaky pigment."

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

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9. The rejection of claims 1-3 and 8-9 under 35 U.S.C. 102(b) as being anticipated by Panush et al (US 4,615,940) has been overcome by argument. Specifically, the color primer coat taught in Panush is not equivalent to the claimed "under clear coat."

10. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Panush (US 4,598,015) has been overcome by argument. The pigmented base coat taught in Panush is not equivalent to the claimed under clear coat.

11. The rejection of claims 4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Panush (US 4,598,015) as applied to claims 1-3 above, and further in view of JP 62057676 (herein referred to as Kansai) has been overcome by argument.

12. The rejection of claims 6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Panush et al (US 4,615,940), as applied to claims 1-3 and 8-9 above, and further in view of Weinert (US 6,270,840) has been overcome by argument.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,063,258 teaches a two coat system for use on metal substrates comprising an unpigmented pearlescent coating and a clear coat.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773